[Abstract:]

[[(Fig. 2)]]

## **ABSTRACT**

A projection objective 1 for short wavelengths, in particular for wavelengths  $\lambda < 157$  nm is provided with a number of mirrors [M1, M2, M3, M4, M5 and M6] that are arranged positioned precisely in relation to an optical axis 5. The mirrors [M1, M2, M3, M4, M5 and M6] have multilayer coatings. At least two different mirror materials are provided which differ in the rise in the coefficient of thermal expansion as a function of temperature in the region of the zero crossing of the coefficients of thermal expansion, in particular in the sign of the size.